



Carbondore



CARBONDORÉ WHITEPAPER

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ABSTRACT

Carbondore platform is a Regenerative Finance project created to leave the world in the best way for future generations and to find solutions to environmental problems around the world. The project has implemented strong security measures to protect users' funds and data from malicious attacks. This combined with its decentralized nature has made it a secure and reliable platform for businesses and organizations.

Carbondore's vision is to create a carbon-free world in a changing world order. Carbondore Chain is much more than a blockchain. The Carbondore ecosystem is not designed by any person or organization, it is an organically evolving structure supported by green people who feed the ecosystem to make it more vibrant and diverse, who think about how to make the world more carbon-free, and who strive to make our planet more livable.

Blockchain technology has found a transformative application in carbon trading, revolutionizing the way emissions are monitored, recorded, and traded. It has the potential to accelerate the global deployment of an emissions trading system (ETS) and improve the efficiency of existing systems. With this technology, verification of transmitted data and information is no longer done through a central actor, but through a peer-to-peer (P2P) network. By providing a decentralized and immutable ledger, blockchain ensures transparency, security, and accountability in carbon markets. Through smart contracts, emission reduction targets and commitments can be automatically executed, streamlining the verification and certification processes. This enables stakeholders to have real-time access to accurate emissions data, reducing the risk of fraud and inaccuracies. Additionally, blockchain facilitates fractional ownership of carbon credits, enabling wider participation in the market and unlocking opportunities for smaller players. Ultimately, the integration of blockchain technology in carbon trading has the potential to accelerate the transition toward a more sustainable and low-carbon future by creating a robust and efficient marketplace for emissions reductions.



Carbondore

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1. INTRODUCTION

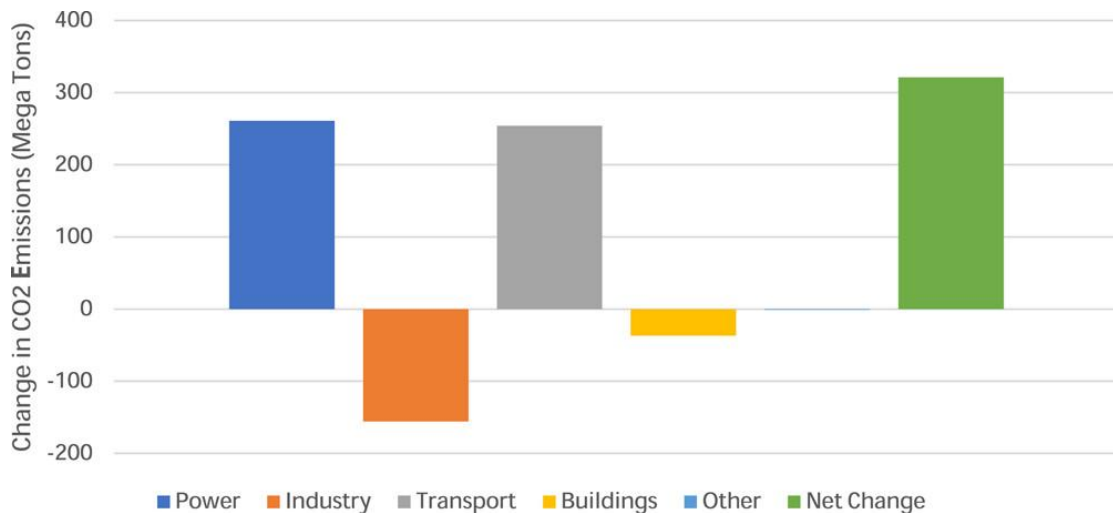
1.1 Carbon Emissions

The release of carbon into nature as a result of various reasons is called carbon release. Although carbon dioxide is commonly referred to as carbon dioxide, many types of gases such as methane and nitrous oxide are also among the harmful gases emitted to nature. These types of gases are also considered within carbon emissions.

Carbon is the most fundamental building block of life on Earth. Carbon, which can bond with many elements in different lengths, is with us almost everywhere, from the air we breathe, the product we grow and the structure of our body.

Carbon emission, in its simplest form, means the release of carbon dioxide into the environment, which is caused by various reasons. Carbon dioxide is mostly released on earth as a result of human activities. Industrial production, energy production, livestock and agriculture cause the areas that cause the most carbon emissions.

Carbon traps the earth's heat and re-radiates it in all directions. This triggers global warming, which is one of the biggest damages in the world. Global warming also brings climate change.



Humans cause a large amount of carbon emission to the earth, from global warming to thinning of the ozone layer, from carbon emissions to various climate changes. That's why the Carbondore Foundation aims to continue people's activities in a way that reduces carbon emissions.

The use of fossil fuels, climate change, the melting of glaciers, the irregularity of greenhouse gases and many other reasons cause the amount of carbon dioxide to increase. The oceans, on the other hand, create the density difference between air and water, greatly avoiding carbon



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dioxide. When the amount of carbon dioxide in the air increases, the oceans begin to attract more gas to maintain balance. Not only do the oceans store a significant portion of carbon dioxide, but also absorb almost all of the heat generated by the greenhouse effect caused by human resources.

However, as carbon dioxide increases, it traps more carbon dioxide in the oceans, which causes the seas to become increasingly acidic. In addition, because the oceans that trap warming air in have to trap much more heat than they can handle, sea level rises and causes great damage to the marine ecosystem.

When we disturb the balance of the world, the world tries to destroy it with the natural environment it offers and to cope with the damage done. The fact that humanity reduces the damage it causes to the world actually contributes to the continuation of the ecological system of the world in its own normal. Oceans, trees, sun, wind, all of these continue to benefit every second in order to protect the health of nature. Carbondore, on the other hand, helps the ecosystem to minimize the damage to the world with its carbon-free renewable energy system.

1.2 Climate Crisis

The average annual temperature in the world is increasing every time, which means that global warming is happening. As a result, climate imbalances occur, and climate change occurs. Eventually, all living things on Earth are facing a climate crisis.

The climate crisis is a natural phenomenon that has been going on since the world came into existence. Negative changes in climatic conditions bring with them serious dimensions such as drought, global rainfall, and problems such as increasing temperature by going out of seasonal norms. However, the impact of humanity on the world and climate and the threat it poses to the future have started to grow day by day. This threat has now turned into a global environmental crisis.

Carbon, a type of greenhouse gas, is a type of gas that absorbs and emits heat. Accordingly, carbon traps the world's heat and re-emits it in all directions. Thus, it accelerates global warming to a great extent and becomes the main cause of climate change. Ozone depletion and ecosystem damage are just a few of the effects of carbon emissions.

To minimize the dCarbondore stating effects of climate change, the rise in average temperatures needs to be limited to a maximum of 2°C. In order to achieve this target, the CO₂ ratio in the atmosphere should not exceed 450 ppm.

Global warming is not just about the increase in temperatures. Floods on Earth are exacerbating disasters such as hurricanes and forest fires. This, in turn, endangers our planet.

As the popularity of blockchain technology and mining increases day by day, the "Carbon



Emissions" and, accordingly, the climate crisis increases significantly.

In order for the climate crisis to be preventable, we can start by changing our living standards and habits individually. In addition, to solve the climate crisis, which is the biggest problem that the whole world needs to address, and in order to prevent the problems that cause the climate crisis, the Carbondore Foundation will contribute to the solution of the climate crisis with the institutions and organizations that address many problems and take steps for environmental health.

1.3 Global Warming

Various gases in the atmosphere that surrounds the earth create a greenhouse effect and ensure that the current temperature degrees of the earth remain as they should be. The increase of greenhouse gases in the atmosphere causes global warming and poses a threat to all living things. Global warming causes the glaciers that have accumulated in the poles and high mountains to gradually melt, which will be the trigger for many natural disasters as sea levels will rise as a result of the melting of the glaciers.

We can say that human norms such as rapid population growth, rising living standards of humanity, and excessive use of fossil fuels are actually factors that increase the effects of global warming. In fact, if global warming is not prevented in some way, it is inevitable that it will complicate the living conditions of plants and animals along with human life.

Since the understanding that global warming occurs as a result of the existence of humanity, many individual or institutional studies have been carried out to prevent it. Carbondore will take every step that can prevent the global warming caused by humanity by guiding individuals and working hand in hand with institutions.



1.4 Blockchains

2. Carbondore Platform

2.1 What is Carbondore platform

Carbondore platform is a Regenerative Finance project created to leave the world in the best way for future generations and to find solutions to environmental problems around the world. The project has implemented strong security measures to protect users' funds and data from malicious attacks. This combined with its decentralized nature has made it a secure and reliable platform for businesses and organizations.

The Carbondore carbon offset platform is an e-commerce platform where a company, an organization, or an ordinary citizen can buy a currency (carbon credits) to save GHG emissions or to support environmental actions. The carbon offset process in this platform is shown below.



2.2 Carbondore Labs

Carbondore Labs identifies blockchain entrepreneurs, existing startups and communities, gathers, invests, empowers and leads environmentalists by funding industry projects focused on growing its own ecosystem with the potential to make the world more livable with its broad blockchain. Carbondore Labs is extremely committed to making the future more livable.

Carbondore Chain is a high-performance blockchain that can enable growing environmentally friendly, green-minded, decentralized applications and systems to scale with high security. Carbondore Labs is an organization dedicated to supporting Carbondore Chain and other technologies in its ecosystem.

Our vision for Carbondore Labs is to create a carbon-free world in a changing world order. Carbondore Chain is much more than a blockchain. The Carbondore ecosystem is not designed by any person or organization; it is an organically developing structure with the support of green-minded people who feed the ecosystem to make it more vibrant and diverse, think to make the world more carbon-free, strive to make our planet more livable. The foundation of the Carbondore Labs vision is to use renewable energy sources, so we look to the future green.

2.3 Carbondore Chain

Carbondore is an Ethereum-based blockchain network project, which was created to minimize the carbon emissions in our world and to completely eliminate it in the sectors that have the opportunity, which keeps commercial activities in the background and was established to contribute to the ecological system in our world.

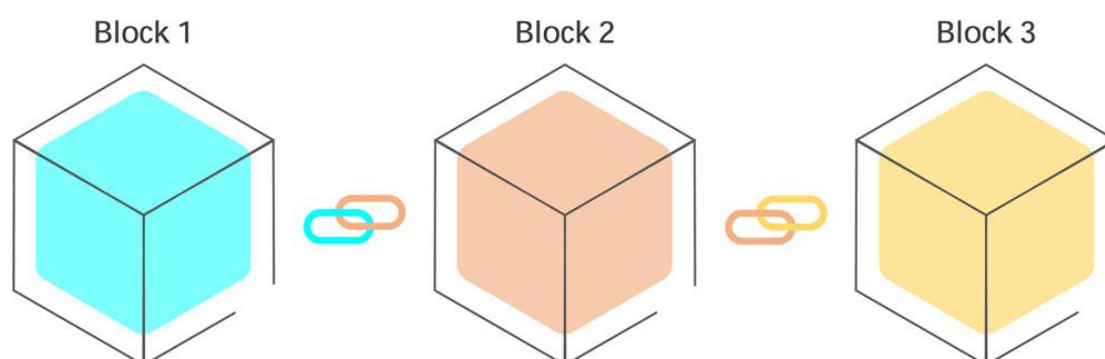
Carbondore uses most of the profits to be made on exchanges or direct trades to work to prevent carbon emissions.

Carbondore runs on its own mainnet. Anyone who wants to contribute to the development of the network can join network.

Wallets belonging to the Carbondore blockchain network can be added to any wallet that supports the Ethereum network. At Carbondore we support and develop the GreenWallet crypto asset wallet.

2.3.1 What is Blockchain?

Blockchain, sometimes referred to as distributed ledger technology (DLT), records the history of any digital asset using a decentralized network and chained blocks through encrypted hashes.⁴⁴ This system is completely immutable and transparent. A decentralized network is something similar to the Google Doc. When a Google Doc is created and shared with a group of people, the document is distributed instead of being copied or transferred. This system creates a decentralized distribution chain of consecutive blocks that allows everyone to access the basic document at the same time. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data. As shown in Figure 8, cryptographic concepts are used to protect and link each of these data blocks. This design makes it extremely difficult for malicious actors to alter historical data, providing a high level of trust in the information stored on the blockchain.



One of the notable features of blockchain technology is the smart contract, self-executing, and

programmable agreements encoded within the blockchain. Smart contracts automate and enforce predefined conditions, streamlining processes and reducing the need for intermediaries. The combination of blockchain's transparent and secure ledger with the programmability of smart contracts enhances efficiency and trust in transactions across various sectors, collectively contributing to the evolution of the broader concept of DLT.

2.3.2 Smart contract

In the traditional electricity market, electricity flows from large power stations and through national/regional transmission grids to local distribution systems that are connected to the end consumers. Network operators ensure the matching of demand and supply and maintain the quality of electricity at all times. This includes ensuring that the frequency of the system is maintained within the permitted range, the balance of supply and demand instantaneously, and the existence of sufficient storage capacity in the system in case of significant unforeseen changes in supply or demand by providing “ancillary services.” Network operators can be considered as intermediaries between producers and consumers. In traditional systems, the balance is managed at the transmission level, while in today's networks, this management is done at the local distribution level. The rapid integration of intermittent and often very distributed renewable generations in the system, as well as the integration of products and services based on information and communication technologies, have increased the need to use an intelligent platform for energy management and balance of supply and demand. The need to implement such a system is to use smart technical tools, smart interaction initiatives, and smart monitoring tools like smart contracts.

Smart contracts are simple codes that can be executed to perform a specific function. These contracts are equivalent to paper contracts, but they eliminate the need for an enforcement agency to ensure compliance because once the contract is executed, it is completed exactly as planned, regardless of any additional human input. A carbon credit ecosystem based on blockchain technology is created in Saraji and Borowczak that includes four smart contracts: (i) recording the essential data using a registry system on the blockchain, (ii) mining carbon tokens, (iii) multisignature contract, and (iv) automated market maker. Various works have studied how to use smart contracts and their effects in different smart grids. Richter and Pollitt⁵⁸ studies the heterogeneity of home consumers' preferences for smart contracts for electricity services in the context of a smart grid. The results show that smart electricity service providers can significantly reduce their customer acquisition costs by targeting customers with special characteristics. In Foroozandeh et al., a contract for energy management of a smart residential building with PV production, electric vehicles, and a battery energy storage system is presented. In this building, each customer has a flexible contract power and the entire residential building has a single contract power. The results indicate that by using the optimal amount of contracted power of the unit and intelligent management system, the electricity cost of the building is reduced significantly by 47%. Table 2 reviews some previous works on smart contracts.

2.3.3 Distributed ledger

DLT stands as the cornerstone of blockchain systems, revolutionizing the traditional approaches to data management and verification. Within the realm of carbon trading, DLT offers a decentralized, transparent, and immutable ledger, facilitating secure and efficient transactions while eliminating the need for intermediaries. The P2P nature of DLT ensures that transaction records are simultaneously stored across a network of nodes, fostering a tamper-resistant ecosystem where each participant possesses a synchronized and continuously updated ledger. This decentralized consensus mechanism not only enhances data integrity and security but also engenders trust among participants, paving the way for innovative and transparent carbon trading platforms.

The distributed ledger is an immutable historical record; in fact, all blockchain transactions are recorded in an immutable ledger and distributed throughout the network. In general, there are three types of distributed ledger: (i) single-entry ledger includes one-way entry in the credit or debit column, (ii) double-entry ledger includes simultaneous tracking of debts and credits, and (iii) triple-entry ledger includes an advanced double entry system where all transaction inputs are verified and secured by a cryptographic system. In the blockchain, a triple ledger is used, which includes debt, credit, and links between previous blocks.

2.4 Carbondore Store

We are here to end the climate crisis with the support of the cryptocurrency industry. At the very beginning of our aim to establish Carbondore Store, we aimed to help all users who want to reduce carbon emissions in our world, with just a few steps. Thanks to Carbondore Store, purchased carbon loans will be directly transferred to projects aimed at reducing carbon emissions. In this way, the impact of the benefits of carbon credit buyers can be monitored transparently. Carbon loans sold at Carbondore Store will provide financial support to projects aimed at directly reducing carbon emissions. These projects will play an important role in the fight against the climate crisis by increasing the use of renewable energy sources and reducing carbon emissions. As a result, Carbondore Store, which aims to end the climate crisis with the aid it will collect from around the world using blockchain technology, is an important option for people who want to contribute to the fight against the climate crisis. By participating in this project, people will not only reduce their carbon footprint, but also support the fight against the climate crisis.

While establishing Carbondore Store, we primarily aimed to help all users who want to reduce carbon emissions in our world, with just a few steps. By purchasing carbon credits from our store with various payment methods, users will be able to support projects that reduce carbon emissions around the world. In addition, by purchasing Carbon credits through Carbondore Chain with their Carbondore's, they will help us realize our "strategies" and complete carbon emission reduction projects carried out around the world. We will use all aid funds collected through Carbondore Labs to complete projects to reduce carbon emissions and end the climate crisis published on Carbondore Store.

The first step to helping prevent the climate crisis starts with knowing your impact on the climate crisis. Then it is about making an effort to reduce this effect as much as possible. Finally, you can take action by supporting the Carbondore Ecosystem, which is fighting the climate crisis.

Understand how your travel, energy use, diet, and other lifestyle choices affect climate.



HOME

1. Turn off lights
2. Turn down heating
3. Properly insulate + draught proof homes
4. Switch to energy efficient lightbulbs
5. Unplug devices
6. Line dry your clothes
7. Switch to paperless billing



TRAVEL

1. Walk or cycle to work
2. Switch to public transport
3. Choose electric vehicles
4. Reduce or eliminate airline travel



SHOPPING

1. Recycle + re-use wherever possible
2. Consume less - buy fewer but better
3. Try to avoid "fast fashion"
4. Buy sustainably-produced food + goods
5. Identify eco-friendly goods: The Ecolabel Index >> provides an extensive directory of environmental certifications for various products + services



FOOD

1. Eat less meat in favour of more plant-based diets
2. Buy locally-sourced, seasonal foods rather than food imported from overseas
3. Plant a garden + grow your own veggies
4. Reduce or eliminate your consumption of bottled water and other beverages



ENERGY

1. Switch to an electricity tariff supplied by renewable energy sources
2. Invest in your own sources of renewable energy like fit solar panels, where possible
3. Support energy suppliers that are working to provide 100% clean energy



ADVOCATE

1. Vocally support clean energy with friends, family and colleagues
2. Tell your representatives how you value renewables and climate-friendly policies
3. Vote with your wallet! Support businesses that take climate action

2.5 Carbondore Pay

Carbondore Pay is a worldwide cryptocurrency payment technology where you can get payments from all your friends, family, or customers! Carbondore Pay is an eco-friendly, carbon-free Carbondore product that provides businesses with a dynamic set of integrated payment solutions and financial services to accompany the world's transition to a cashless society and positively improve people's lives and the growth of businesses. With Carbondore Pay, you can make completely contactless, fast, secure, and uninterrupted transactions.



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Why Carbondore Pay?

Cryptocurrencies are accepted by less than 0.001% of the world's companies, and as such, millions of people are unable to pay instantly with the cryptocurrencies they own because businesses are skeptical of accepting cryptocurrency payments due to their potential volatility. Carbondore Pay will solve the spending demands of crypto owners by addressing the concerns of global businesses, allowing payments to be made to retailers with crypto within seconds with the card and mobile application. When the consumer pays with cryptocurrency, this concern of all businesses will disappear as every business will receive the payment in standard currency. All consumers and businesses using Carbondore Pay will continue to earn with every transfer with the Carbondore Back system and contribute to the carbon-free world thanks to Carbondore Chain.

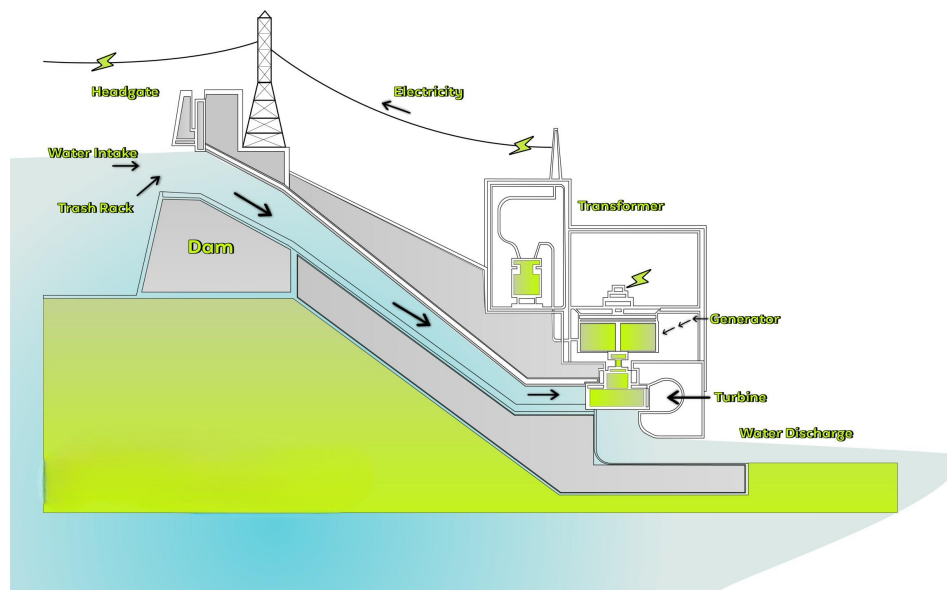
With Carbondore Pay, we will enable beneficiaries of online marketplaces and other service providers to send money securely and on the spot to their bank accounts. To provide faster payments with Carbondore Pay; it can help you earn the trust of more vendors, customers, and partners. While doing all this, please remember that we will be environmentally friendly and use carbon-free Carbondore Chain infrastructure!

3. CARBONDORE ECOSYSTEM

3.1 Hydroelectric

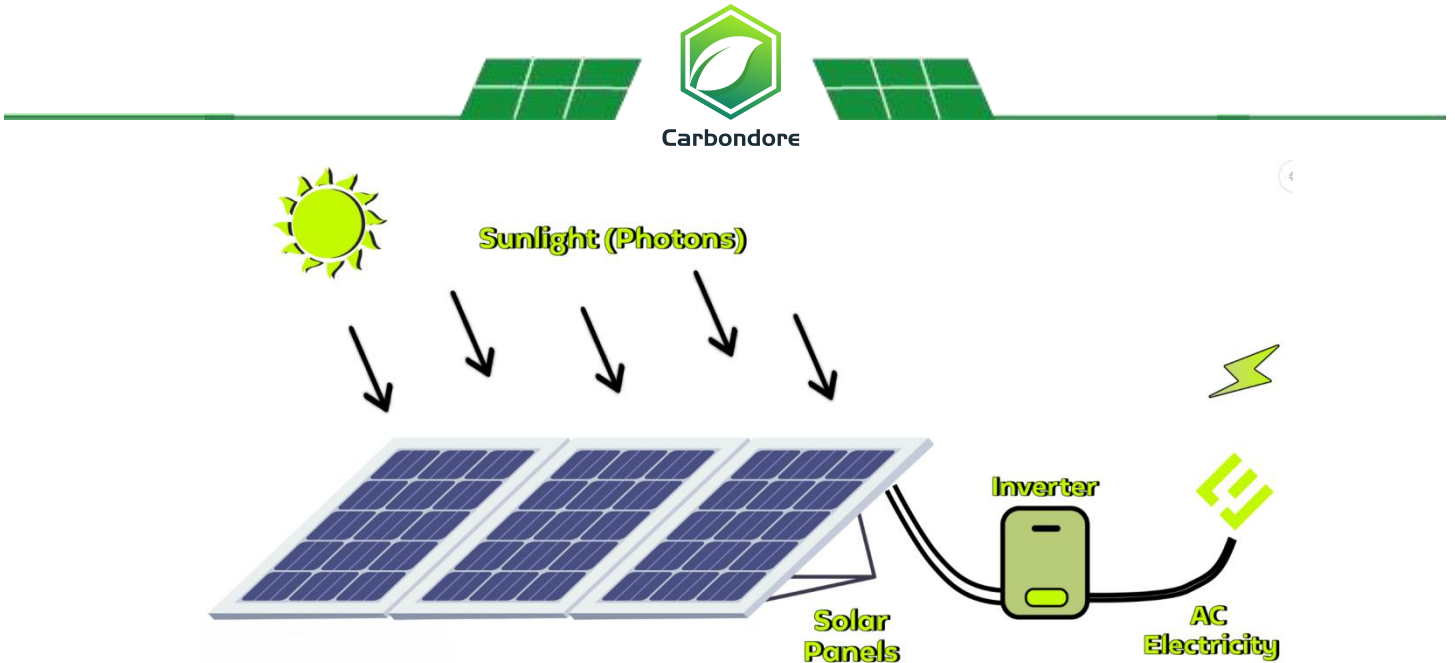
The hydroelectric power plant contains gravitational potential energy of the water accumulated in the dam. When water falls from a certain height, according to the principle of energy conversion, Gravitational Potential Energy is first converted into kinetic energy and then into potential electrical energy by means of the rotation of the generator motor connected to the turbine wheel. This is called a hydroelectric power plant, which is classified as renewable energy. Hydroelectric power is a type of energy that has widespread use.

One of the biggest advantages for the Carbondore Ecosystem is that the unit price of the energy produced is affordable. A large part of the investments made for the hydroelectric power plant consists of Carbondore Chain transaction fees and contributes to the development of Carbondore. It is an important resource that reduces processing fees thanks to its affordable cost since hydraulic energy is renewable, it is of great environmental importance.



3.2 Solar Energy

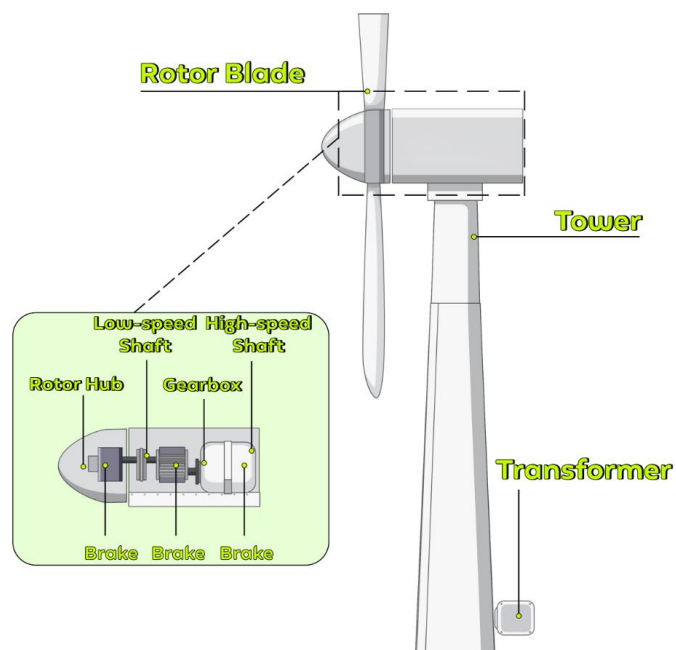
Solar energy is heat and bright light, the source of which is the Sun. It is a type of clean energy; they do not have the burden of polluting the environment such as smoke, gas, carbon monoxide, sulfur and radiation. Thanks to such features, one of the works that the Carbondore Ecosystem will do to reduce carbon emissions in the world will be to expand the use of solar energy.



3.3 Wind Energy

Given the depleting resources and increasing demand for energy, renewable energy stands out as a sustainable alternative. Wind energy is an energy source that continues to be valid all over the world. Wind energy, which is one of the renewable energy sources and can produce effective solutions in environmental health in this respect.

Dependence on fossil fuels persists today and is known for their damage to nature. The most important reason why wind energy will be used in the Carbondore Ecosystem is that this resource is an environmentally friendly clean energy type!



3.4 Carbon Offset Method

Today, many enterprises and public institutions have adopted the understanding of being carbon neutral, which is known as an application that will reset the emissions arising from their own activities, that is, their negative externalities, for the purpose of social responsibility. The most important tool developed for this purpose is the carbon offsetting method.

Carbon Offset Method is the neutralization of the greenhouse gas released in one place by preventing the greenhouse gas released from another place or by ingesting / trapping the same amount of greenhouse gas in the atmosphere. In other words, it can also be defined as providing financial support to projects that save the same amount of carbon in another place in return for the carbon emissions generated by an institution, or the purchase of carbon certificates that are documented to have occurred in those projects.

Carbon offsetting is a system in which there is no intervention of states and where a voluntary basis is applied. The point to be considered here is that carbon reduction measures to be carried out within the body of institutions and organizations are a priority. Carbondore, on the other hand, will apply the carbon offsetting method with its own work and contribute to carbon balancing by leading this process and gathering institutions and organizations in the Carbondore Ecosystem.

3.5 Carbondore Credit

Carbon credits are emission reduction units used to communicate each tonne of CO₂ equivalent greenhouse gas reduction made by an activity that reduces greenhouse gas emissions. These credits are called Verified Emission Reduction (VER). The definition of greenhouse gas emission reduction represented by these credits, also known as carbon offset certificates, is made with reference to an activity with an equivalent capacity of greenhouse gas emissions.

Carbon credits (certificates) are earned by projects that reduce different types of greenhouse gases (such as CO₂, CH₄, N₂O) in the following categories. We can give examples such as agriculture, chemical process/industrial production, forestry and land use, transportation, renewable energy, energy efficiency/fuel replacement, waste disposal.

The creation of carbon credits can be explained with a simple example. For example, let's say that a wind power plant project produces electricity with a capacity of 90 MW. If the electricity production of the same capacity (90 MW) had been realized with a fossil fuel power plant project, there would have been 190 thousand tons of CO₂ equivalent greenhouse gas emissions from this generation activity in a certain time period. The amount of emission that the Wind Power Plant Project does not produce in the determined time period is expressed as the negative emission amount of this project and the certification process is made per each negative ton of emission. In this case, the Wind Power Plant Project can win 190 thousand VER certificates. The Carbondore Foundation will continue to regularly reduce its carbon emissions by purchasing carbon credits.

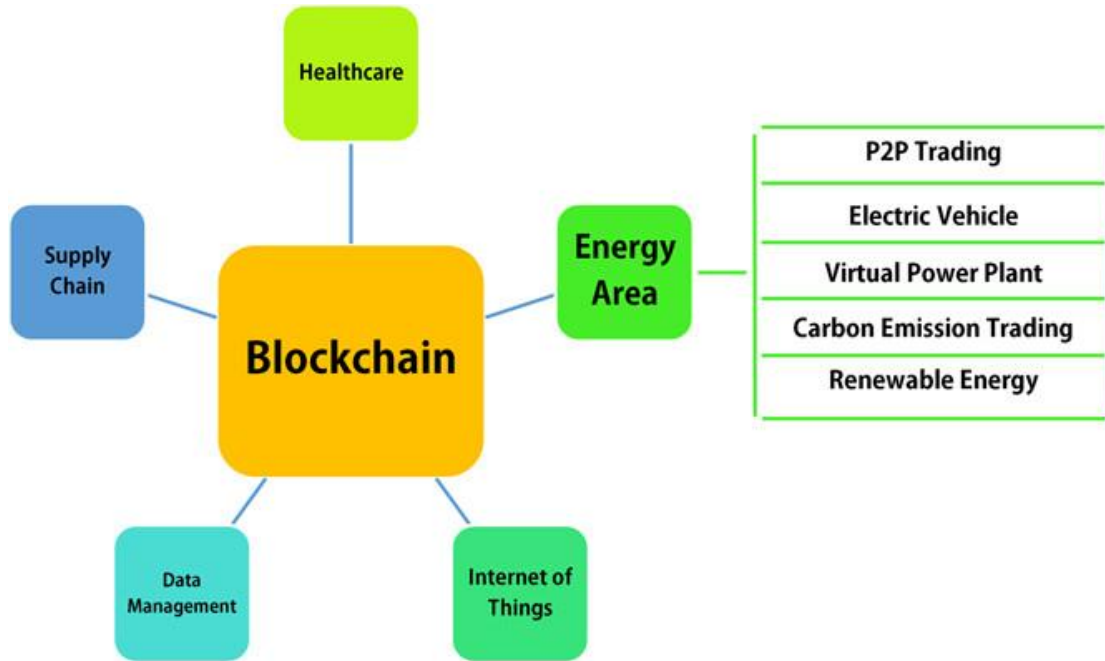
4. APPLICATION OF BLOCKCHAIN IN ENERGY TRADING

Energy is a natural resource that has fueled the growth of countries' economies in the past few decades. As society moves towards digitalization, the reliance on energy also increases increasingly. According to the statistical review of the World Energy Report by British Petroleum, global primary energy demand rose 5.8% and carbon emissions from energy consumption increased by 5.9% in 2021. The shortage of fossil fuels and the known environmental issues related to carbon emissions have helped to increase the focus on discovering alternative energy sources, the most important of which are renewable energy sources such as solar and wind energy.

Extracted energy from different sources (conventional and renewable sources) is generated on the supply side and is delivered to consumers on the demand side. Management of increasing energy demand on the supply side is limited due to the limitations of network infrastructure and resources. One way to manage energy on the demand side is to use distributed renewable energy sources, which is known as cloud energy.⁶⁸ This method creates new challenges for the smart grid.

With the decentralization of the energy sector, many issues such as time-varying renewable generation, distributed storage, control, management, and trading must be considered. These problems cannot be solved by traditional energy systems, while blockchain features can provide suitable solutions.

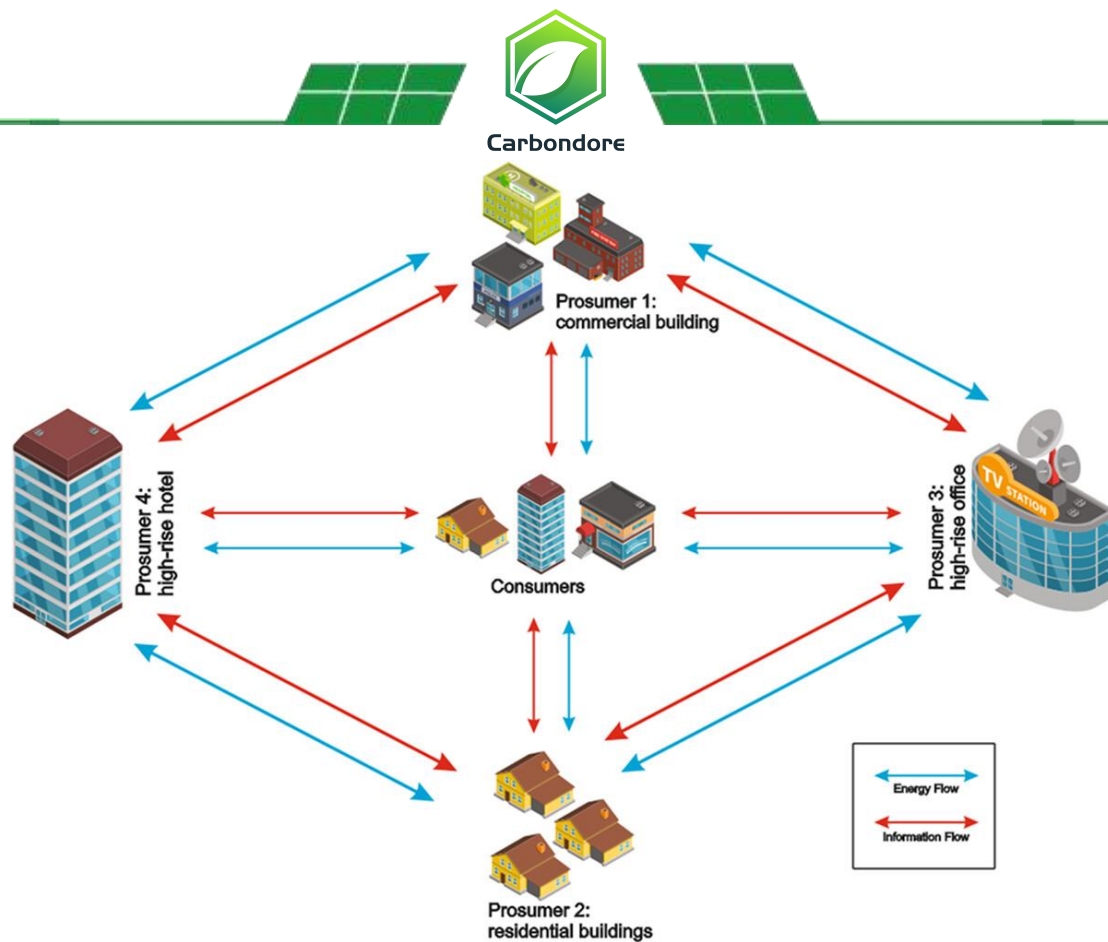
The carbon trading system is a market mechanism that is used to promote the reduction of global GHG emissions. It allows businesses that cannot reduce their GHG emissions to offset these emissions by purchasing credits from others that meet their targets. Previous discussions emphasize the importance of decentralization, a feature commonly associated with blockchain. In recent years, the application of blockchain has increased in many fields, including energy management. Figure 9 shows the application of blockchain in various fields, including the energy area.



4.1 P2P energy trading system

With the emergence of modern energy technologies, the smart energy market is moving from a centralized form to a decentralized one which is known as the P2P model. The main challenges in a P2P energy market are scalability, robustness, security, and privacy issues. A blockchain-based solution is presented to implement a combined energy trading market. It shows that a blockchain-based system is completely decentralized and allows market members to interact with each other and trade energy without the intervention of a third party.

Blockchains are usually managed by a P2P computer network as a public distributed ledger. In this network, all nodes have access to the consensus algorithm protocol to add and confirm new transaction blocks. In P2P energy trading, internal consumption can be effectively increased with the high penetration of renewable energies, reducing pressure on the electrical grid and promoting decarbonization.



4.2 Renewable energies

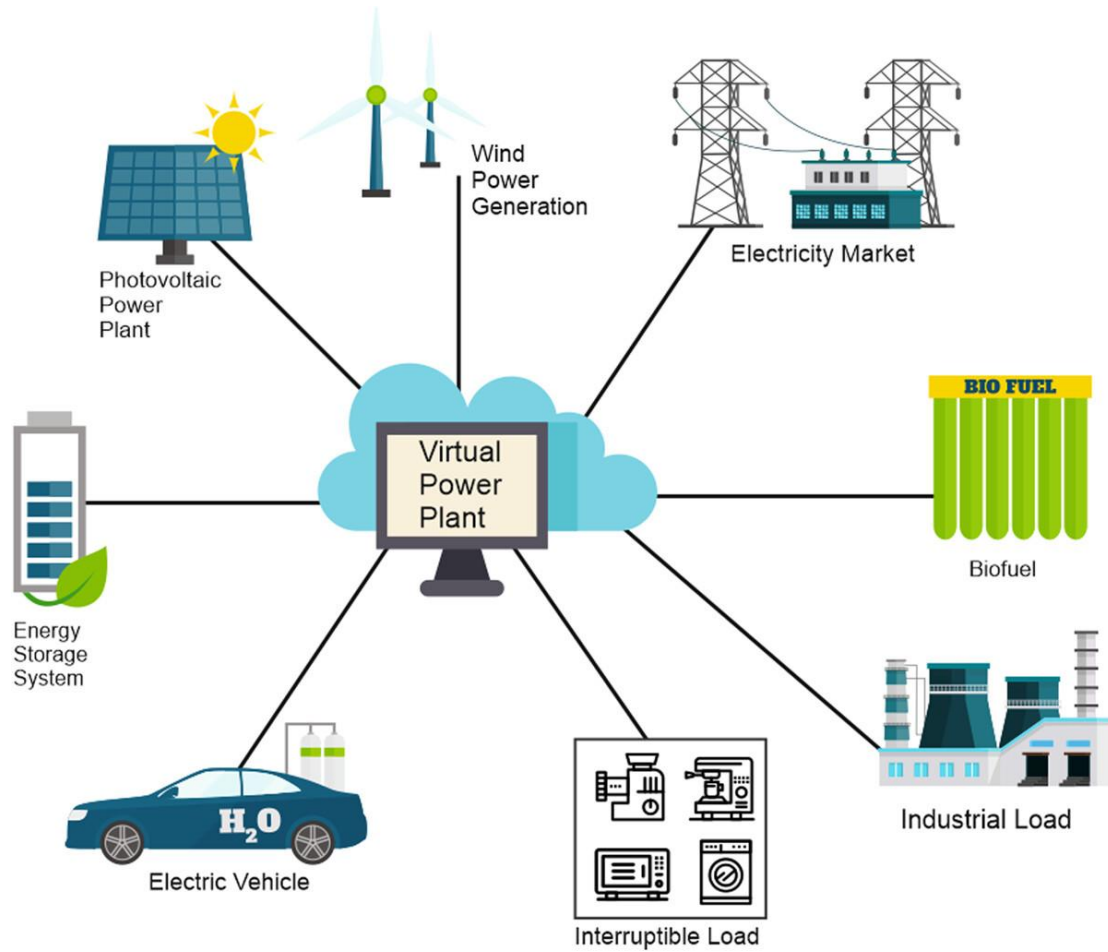
Renewable energy sources are intermittent in nature; the coalition between multiple microgrids based on a P2P energy trading system can solve this problem. A P2P energy trading system for microgrids where a blockchain-based coalition formation method is presented in which several coalition algorithms are executed in parallel, which reduces computing time and allows microgrids to exchange energy more often. The decentralized nature of this system makes it scalable and the algorithms converge quickly.

Basic knowledge about blockchain technology shows the connection of this technology with digital currencies such as Bitcoin and Ethereum. It has caused the development of digital currencies in the field of renewable energy trade in recent years. Several companies are using cryptocurrencies to attract new investors and organize additional financing options in this area. Some examples of cryptocurrencies related to renewable energies are presented in Table 3.

4.3 Virtual power plant (VPP)

Changing the style of the traditional energy management system to a decentralized power system with a two-way flow of power and information for the integration of distributed generation (DG) units is essential in moving towards smart energy networks. VPPs are known as a promising technology for managing DG units and increasing participation in improving the power

system performance.



VPPs represent the future of power generation because they enable intelligent energy consumption in a distributed environment through optimal management of demand and power generation.⁸⁸ This means that each user can produce and consume their energy at the same time, which leads to the active participation of consumers in decision-making. In addition, VPPs are a useful tool for integrating renewable energies in helping to balance the grid. VPPs can also be used to integrate the load management of electric vehicles.

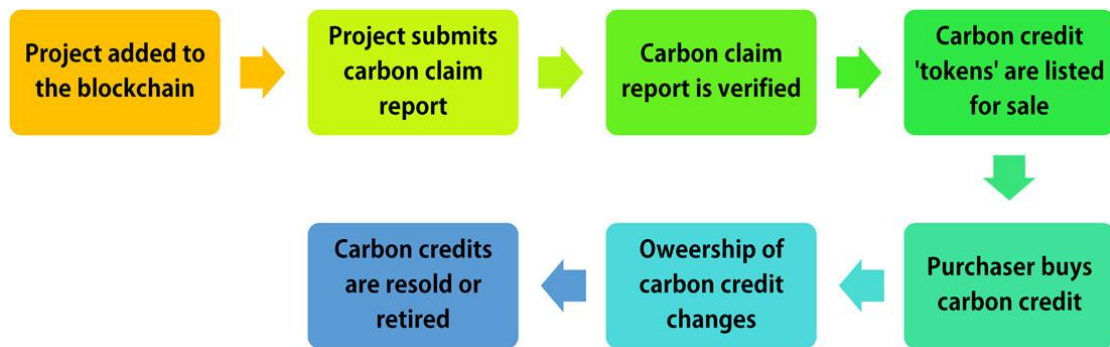
4.4 Blockchain in carbon trading

Carbon trading is a market-based tool to reduce climate change caused by GHG emissions. This tool was first introduced as part of the Kyoto Protocol. Currently, there are several national carbon tax and pollutant trading systems that cover about one-fifth of global GHG emissions. The use of blockchain in the carbon industry is inevitable. Many features of the carbon trading market are similar to the blockchain mechanism. The nature of blockchain is a decentralized database while the essence of carbon trading is the assessment, storage, trading, and management of carbon emissions. A blockchain is a form of data existence, while carbon trading is the use of data. Figure 12 shows the simplified steps required to conduct carbon trading on a blockchain



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platform, whereby project owners create tokens for carbon-saving projects that are then traded through a decentralized marketplace.



To protect privacy, a script during wallet address generation is hashed. Also, a novel carbon accounting method with an incentive mechanism for carbon reduction is developed for distributed prosumers, Carbondore luating emission behaviors efficiently.

5. Token and Economic

The token CARD is issued by the Carbondore Foundation and can be used on the Carbondore Chain Carbon trading service platform to pay remuneration and transfer fees. CARD is the fuel that supports the operation of the data service platform. The total amount of CARD is 500 million and will never be issued.

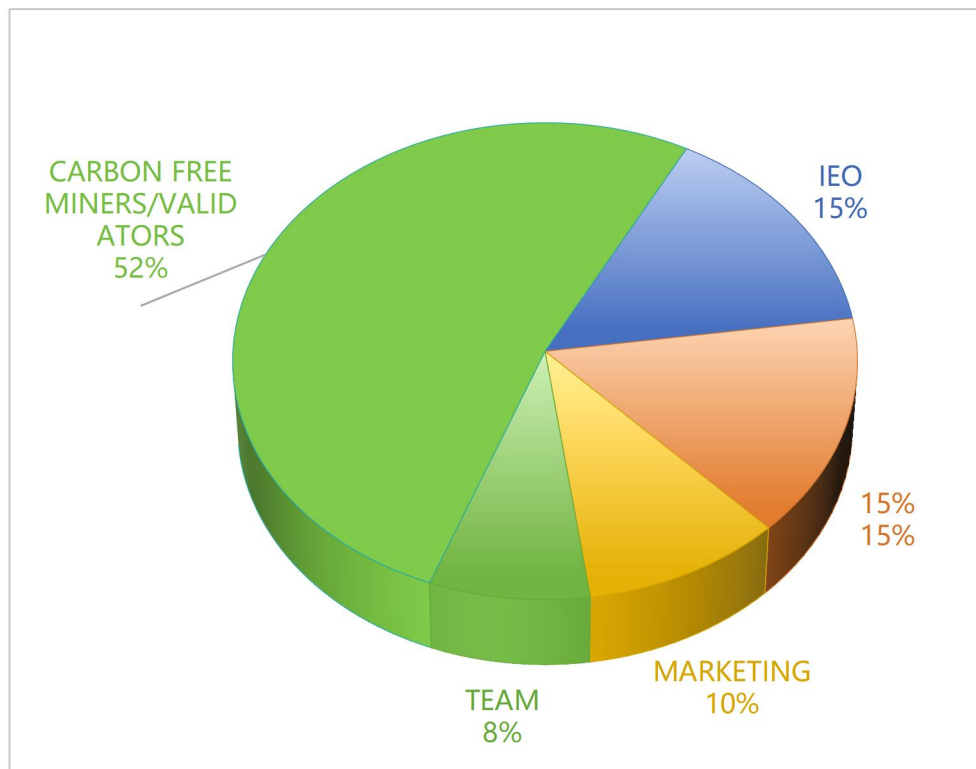
5.1 Token Distribution

Token Name: **CARD**

Total Supply: 500 Million **CARD**

Token Distribution:

- **IDO: 15%**---by the market subscription output, without lock warehouse, all released before the line.
- **DEVELOPMENT: 15%**---locked up for 6 months, and then release 10% every quarter until the release.
- **MARKETING: 10%**---mainly used for project operation and daily carbon data collection, reviewed by the foundation and released irregularly.
- **TEAM: 8%**---lock up for three years, and then release 1% quarterly until the release.
- **CARBON FREE MINERS/VALIDATORS: 52%**---the carbon miner/validators who uploads the carbon emissions and credits to the Carbondore chain, or data mining, will get the reward.



5.2 Token Utility

Carbondore token(CARD) has been developed to have its own Marketplace. A marketplace, where you will buy sustainable goods and services in order to make your life more sustainable. And to achieve this goal, every good and every service present in the marketplace has to undergo a review process. Carbondore token(CARD) can, for instance, help you redesign your home to produce clean energy, buy electric cars and solar panels.

Users:

- ◆ Can buy cryptocurrency on the exchange
- ◆ Can buy cryptocurrency from the platform directly
- ◆ Can send transactions

Platform:

- ◆ Can earn service fees
- ◆ Can sell cryptocurrency to customers
- ◆ Can earn cryptocurrency from transaction fees

Carbon Free Miners:

- ◆ Can validate transactions, mine Carbondore token(CARD)
- ◆ Can use cryptocurrency to list products on the platform
- ◆ Can use cryptocurrency to promote products on the platform at a discount

6. Core Team

The successful advancement of our Carbondore chain project is due to an outstanding team of senior experts in the fields of finance and technology. These team members not only have extensive expertise and experience in their respective fields, but also play a vital role in driving the project to reach key milestones.

Founding Team:

Dr. Nicholas Gergio - CEO and Co-Founder

- Ph.D. in Computer Science from the University of California, Berkeley
- Extensive experience in developing decentralized applications and blockchain infrastructure
- Former blockchain engineer at a leading technology company

Dr. Michael Dosen - Chief Technology Officer and Co-Founder

- Ph.D. in Cryptography from the Massachusetts Institute of Technology
- Pioneered the use of zero-knowledge proofs and advanced cryptography in blockchain systems
- Previously served as the head of R&D at a prominent blockchain research institute

Dr. Sarah Park - Chief Operations Officer and Co-Founder

- Ph.D. in Business Administration from Stanford University
- Expertise in supply chain management and logistics optimization
- Former executive at a multinational logistics and transportation company

Dr. Alex Kim - Chief Sustainability Officer and Co-Founder

- Ph.D. in Environmental Engineering from the University of Cambridge
- Specialized in the application of blockchain technology to sustainability and carbon trading
- Previously led the blockchain and sustainability initiatives at a global non-profit organization

Key Consultants:

Dr. Olivia Nguyen - Blockchain and Cryptocurrency Advisor

- Ph.D. in Computer Science from the University of California, Los Angeles
- Co-founder of a leading blockchain research and development firm
- Recognized expert in the application of blockchain technology in supply chain and logistics

Dr. David Lime - Sustainability and Carbon Markets Advisor

- Ph.D. in Environmental Economics from the University of Oxford
- Extensive experience in carbon trading, climate finance, and sustainable development
- Former director of a prominent carbon market research and consulting organization

7. Disclaimer

7.1 ELIGIBILITY

Carbondore Foundation is a software engineering/consulting company subject to the USA law, provisions and obligations related to Know Your Customer (“KYC”) procedures. The purchase of cryptocurrencies is legally forbidden, such as, but not limited to, China, Algeria, Bolivia, Ecuador, Morocco, and Pakistan, in addition to persons located in any of the jurisdictions blacklisted by the Organization for Economic Co-operation and Development and the United Nations.

7.2 LEGAL DISCLOSURES

This Whitepaper provides information in connection to an opportunity for the acquisition of a cryptocurrency that will grant purchasers economic exposure to financial market. The cryptocurrency will not (i) provide legal ownership over the Issuer’s shares or the Target Assets; (ii) represent debt owed by the issuer to the cryptocurrency owner; nor (iii) provide voting/governance/typical shareholding rights related to the Issuer. This Whitepaper does not constitute a prospectus, an offering memorandum and/or other offering document relating to the Issuer and has not been reviewed or approved by any financial regulator or securities commission in any jurisdiction. Investing in cryptocurrency involves several risks. There can be no assurance that cryptocurrency holders will be able to receive a payback of their capital or any positive returns on their purchase of cryptocurrency. Prior to investing in cryptocurrency, prospective purchasers should carefully consider the section “Risk Factors” of this Whitepaper, which despite not providing an exhaustive list or explanation of all the risks purchasers may face when investing in cryptocurrency, shall be used as guidance. Prospective purchasers should consider carefully whether a purchase of cryptocurrency is suitable for them considering the information herein and their personal legal and financial circumstances. Unless otherwise indicated or the context otherwise requires, all references in this Whitepaper to “Issuer”, “we”, “our”, “ours”, “us” or similar terms refer to the Issuer.

7.3 FORWARD-LOOKING STATEMENTS

This Whitepaper may contains estimates and forward-looking statements which are mainly based on the current expectations and estimates of future events and trends that affect or may affect the business, financial condition, results of operations, cash flows, liquidity, prospects, and the envisaged valuation of the cryptocurrency.

Although we believe that these estimates and forward-looking statements are based upon reasonable assumptions, they are subject to many significant risks, uncertainties and are made. Considering the current available information. Forward looking statements speak only as of the date they were made, and we do not undertake the obligation to update publicly or to revise any forward-looking statements after we distribute this document because of new information,

future events or other factors.

Considering the risks and uncertainties described above, the forward-looking events and circumstances discussed in this document might not occur and future results may be materially different from those expressed in or suggested by these forward looking statements. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual events or results, performance, or achievements to differ materially from the estimates or the results implied or expressed in such forward-looking statements. These factors include, amongst others:

A - Changes in political, social, economic, and stock or cryptocurrency market conditions, and the regulatory environment in the countries in which the Issuer conducts its businesses and operations.

B - The risk that the Issuer may be unable to execute or implement its respective Business strategy and plans.

C - Changes in interest rates and exchange rates of fiat currencies and cryptocurrencies.

D - Changes in the anticipated growth strategies and expected internal growth of the Issuer.

E - Changes in the availability and salaries of employees who are required by the Issuer to operate their respective businesses and operations.

F - Changes in competitive conditions under which the Issuer operates, and the ability of the Issuer to compete under such conditions.

G - Changes in the future capital needs of the Issuer and the availability of financing and capital to fund such needs.

I - War or acts of international or domestic terrorism.

J - Occurrences of catastrophic events, natural disasters and acts of God that affect the businesses and/or operations of the Issuer; and

H - Other factors beyond the control of the Issuer. The Issuer disclaims any responsibility to update any of those forward-looking statements or publicly announce any revisions to those forward-looking statements to reflect future developments, events, or circumstances, even if new information becomes available or other events occur in the future.

7.4 ACCURACY OF INFORMATION NO CONSENT OF PARTIES

REFERENCED IN WHITEPAPER

This Whitepaper includes technical, market and industry information and forecasts that have been obtained from internal surveys, reports and studies, where appropriate, as well as market and academic research, publicly available information, and industry publications. Such surveys, reports, studies, market research, publicly available information and publications generally state that the information that they contain has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such included information. Save for the Issuer and its respective directors, executive officers and/or other information attributed or perceived to be attributed to such person in connection there with in the Whitepaper and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information by such person, and such persons shall not be



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obliged to provide any updates on said information. The Issuer has not conducted any independent review of the information extracted from third-party sources, verified the accuracy or completeness of such information, or ascertained the underlying assumptions relied upon therein. Consequently, the Issuer makes no representation or warranty as to the accuracy or completeness of such information and shall not be obliged to provide any updates on said information.

7.5 TERMS USED

To facilitate a better understanding of the cryptocurrency being offered for purchase by the Issuer, and the businesses and operations of the Issuer, certain technical terms, and abbreviations, as well as, in certain instances, their descriptions, have been used in the Whitepaper. These descriptions and assigned meanings should not be treated as being definitive of their meanings and may not correspond to standard industry meanings or usage. Words importing the singular shall, where applicable, include the plural and vice versa and words importing the masculine gender shall, where applicable, include the feminine and neuter genders and vice versa. References to persons shall include corporations.

7.6 NO FURTHER INFORMATION OR UPDATE

No person has been or is authorized to give any information or representation not contained in the Whitepaper in connection with the Issuer and its business and operations or the cryptocurrency and, if given, such information or representation must not be relied upon as having been authorized by or on behalf of the Issuer. The continuing sale of cryptocurrency shall not, under any circumstances, constitute a continuing representation or create any suggestion or implication... that there has been no change, or development reasonably likely to involve a material change in the affairs, conditions, and prospects of Issuer or in any statement of fact or information contained in the Whitepaper since the date hereof. Statements made in the Whitepaper are based on the French law and practice in France current at the date it was issued. Those statements are therefore subject to change should that law or practice change. Under no circumstance does the delivery of the Whitepaper or the sale of cryptocurrency imply or represent that the affairs of the Issuer have not changed since the date of the Whitepaper.